



308957

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

IN THE MATTER OF:	)	Docket No.	V-W-97-C-368
)		
2800 S. Sacramento Avenue Site	)	ADMINISTRATIVE ORDER BY	
2800 S. Sacramento Ave.	)	CONSENT PURSUANT TO	
Chicago, Illinois	)	SECTION 106 OF THE	
	)	COMPREHENSIVE	
	)	ENVIRONMENTAL RESPONSE,	
Respondents:	)	COMPENSATION, AND	
	)	LIABILITY ACT OF 1980,	
The Celotex Corporation and	)	as amended, 42 U.S.C.	
AlliedSignal, Inc.	)	§ 9606(a)	

I. JURISDICTION AND GENERAL PROVISIONS

This Administrative Order by Consent ("the Order") is entered voluntarily by the United States Environmental Protection Agency ("U.S. EPA") and the Respondents. The Order is issued pursuant to the authority vested in the President of the United States by Sections 104, 106(a), 107 and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. §§ 9604, 9606(a), 9607 and 9622. This authority has been delegated to the Administrator of the U.S. EPA by Executive Order No. 12580, January 23, 1987, 52 Federal Register 2923, and further delegated to the Regional Administrators by U.S. EPA Delegation Nos. 14-14-A, 14-14-C and 14-14-D, and to the Director, Waste Management Division, Region 5, by Regional Delegation Nos. 14-14-A, 14-14-C and 14-14-D.

This Order requires the Respondents to conduct an Engineering Evaluation and Cost Analysis ("EE/CA") to evaluate alternative response actions pursuant to 40 CFR § 300.415(b)(4)(I), and the Superfund Accelerated Cleanup Model ("SACM") guidance in connection with the 2800 S. Sacramento Avenue Site, which includes certain residential areas adjacent to 2800 S. Sacramento Avenue, Chicago, Illinois.

A copy of this Order will also be provided to the State of Illinois, which has been notified of the issuance of this Order pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

Respondents' participation in this Order shall not constitute an admission of liability or of U.S. EPA's findings or determinations contained in this Order except in a proceeding to enforce the terms of this Order. Respondents agree to comply with and be bound by the terms of this Order. Respondents further agree that they will not contest jurisdiction, the basis or validity of this Order or its terms in any action to enforce this Order.

II. PARTIES BOUND

This Order applies to and is binding upon U.S. EPA, and upon Respondents and Respondents' receivers, trustees, successors and assigns. Any change in ownership or corporate status of Respondents including, but not limited to, any transfer of assets or real or personal property shall not alter such Respondents' responsibilities under this Order. Respondents are jointly and severally liable for carrying out all activities required by this Order. Compliance or noncompliance by one or more Respondents with any provision of this Order shall not excuse or justify noncompliance by any other Respondent.

Respondents shall ensure that their contractors, subcontractors, and representatives receive a copy of this Order, and comply with this Order. Respondents shall be responsible for any noncompliance with this Order.

III. FINDINGS OF FACT

Based on available information, including the Administrative Record in this matter, U.S. EPA hereby makes the findings of fact below, and, for purposes of enforceability of this Order, the Respondents stipulate that the factual statutory prerequisites under CERCLA necessary for issuance of this Order only have been met. U.S. EPA finds the following:

1. The 2800 S. Sacramento Avenue Site ("Site") consists of property owned by The Celotex Corporation ("Celotex") (approximately

18 acres) with an address of 2800 S. Sacramento Ave., property owned by Monarch Asphalt Company consisting of approximately 6 acres formerly having an address of 3033 S. Albany Ave. ("the industrial portion of the Site") (See Figure 1); and certain other residential areas where hazardous substances from manufacturing operations from these properties have come to be located.

2. Residential areas are adjacent to the Celotex and Monarch Asphalt properties to the west across an alley and Albany Ave., and to the east and north across 27th Street and Whipple Avenue.

3. AlliedSignal Inc.'s ("AlliedSignal") predecessor entities, Allied Chemical and Dye Corporation, Barrett Manufacturing Co., and Barrett Paving Materials owned and operated a facility on the Site that included coal tar distillation to produce refined tars, pitch, oil, creosote, naphthalene, coal tar paints, enamels, pipe coating, and protective coating; manufacture of roofing shingles; an asphalt concrete mixing plant; a sealer plant at which clay and tar were blended to produce driveway sealer. The coal tar distillation was conducted from 1911 and 1970. The manufacture of roofing shingles was conducted from 1911-1967. The asphalt mixing was conducted by AlliedSignal from the 1940s until 1979 when that portion of the facility was sold to Barrett Paving Materials, Inc. The sealer plant operated from the early 1970s until 1977. The facility, other than the asphalt mixing plant, was sold to Celotex (a wholly owned subsidiary of Jim Walter Corporation) in several transactions from 1967 through 1979.

4. Barrett Paving Materials owned and operated the asphalt mixing plant from 1979 until it was sold to Monarch Asphalt Co. in 1989.

5. Monarch Asphalt Company dismantled the asphalt mixing plant and is the present owner of the property on which the asphalt mixing plant was located.

6. Celotex is the current owner of most of the industrial portion of the Site. Celotex owned and operated a portion of the facility for manufacturing bituminous based roofing products from the date purchased from Allied Chemical and Dye Corp. in 1967 until the facility was closed in 1982. Celotex dismantled the manufacturing facilities in 1991-1993. From 1993-1994 Celotex imported soil and placed it over the property presently owned by Celotex, excepting that portion covered by concrete slabs.

7. In 1991 and 1992 the Illinois Environmental Protection Agency ("IEPA") conducted inspections and sampling at the Site. The results of such inspections and sampling are recorded and presented in the following documents prepared by IEPA: CERCLA Screening Site Inspection Report, CERCLA Screening Site Inspection Analytical Results, CERCLA Expanded Site Inspection Report, and CERCLA Expanded Site Inspection Analytical Results. The sampling was conducted on Site including nearby residential areas. IEPA inspectors observed openings in the fence around the industrial portion of the Site in several locations, and signs of people residing on the Celotex property. IEPA also observed demolition activities at the industrial portion of the Site, but as of April 1992, a 635-foot long trench, four large tanks, smaller tanks, and some buildings remained on the industrial portion of the Site.

8. Based on IEPA sampling results, the former process and storage areas on the industrial portion of the Site contained materials and soils with maximum concentrations of the following semivolatile organic compounds exceeding the maximum concentrations in the background samples and in the nearby residential soil samples:

POLYAROMATIC HYDROCARBONS (PAHs)

acenaphthene; acenaphthalene; anthracene; benzo(a)anthracene; benzo(b)fluoranthene; benzo(g,h,i)perylene; benzo(k)fluoranthene; benzo(a)pyrene; chrysene; dibenz(a,h)anthracene; fluoranthene; fluorene; indeno(1,2,3-cd)pyrene; pyrene; 2-methylnaphthalene; 1-methylnaphthalene; naphthalene; phenanthrene;

OTHER SEMIVOLATILE ORGANIC COMPOUNDS

dibenzofuran; n-nitrosodiphenylamine; carbozole;

9. Based on the IEPA investigations, the following semivolatile organic compounds were detected in the 17 nearby residential soil samples:

VOLATILE ORGANIC COMPOUNDS

toluene; xylene;

POLYAROMATIC HYDROCARBONS (PAHs)

acenaphthene; acenaphthalene; anthracene; benzo(a)anthracene; benzo(b)fluoranthene; benzo(g,h,i)perylene; benzo(k)fluoranthene; benzo(a)pyrene; chrysene; dibenz(a,h)anthracene; fluoranthene; fluorene; indeno(1,2,3-cd)pyrene; pyrene; 2-methylnaphthalene; 1-methylnaphthalene; naphthalene; phenanthrene;

METALS

copper; mercury; zinc.

The cumulative PAH concentration in each of the 17 residential soil samples exceeded the maximum background concentration. In addition, the following individual PAH compounds exceeded the maximum background concentration in each of the 17 residential soil samples: acenaphthalene; pyrene; benzo(a)anthracene; chrysene; benzo(b)anthracene; benzo(k)anthracene; benzo(a)pyrene; indeno(1,2,3-cd)pyrene; dibenzo(a,h)anthracene; and benzo(g,h,i)perylene. Copper, zinc, barium, and lead concentrations in each of the residential soil samples also exceeded the maximum background concentrations.

10. In an inspection on July 18, 1994, U.S. EPA inspectors observed that a light-colored soil had been placed over a large portion of the property presently owned by Celotex. However, no top soil had been added, nor had there been planted any effective vegetation to stabilize the soil cover. The fence around the industrial portion of the Site appeared to be intact.

11. In August 1995, under an informal agreement with U.S. EPA, AlliedSignal collected soil samples from approximately 50 residences. The purpose of this sampling was to determine the aerial extent of PAH contamination in residential soils at the Site.

IV. U.S. EPA'S CONCLUSIONS OF LAW AND DETERMINATIONS

Based on the Findings of Fact set forth above, and the Administrative Record in this matter, U.S. EPA has determined that:

1. The 2800 S. Sacramento Avenue Site is a "facility" as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

2. The following compounds are "hazardous substances" as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14):

POLYAROMATIC HYDROCARBONS (PAHs)

acenaphthene; acenaphthalene; anthracene; benzo(a)anthracene; benzo(b)fluoranthene; benzo(g,h,i)perylene; benzo(k)fluoranthene; benzo(a)pyrene; chrysene; dibenz(a,h)anthracene; fluoranthene; fluorene; indeno(1,2,3-cd)pyrene; pyrene; 2-methylnaphthalene; 1-methylnaphthalene; naphthalene; phenanthrene;

OTHER SEMIVOLATILE ORGANIC COMPOUNDS

dibenzofuran; n-nitrosodiphenylamine;

VOLATILE ORGANIC COMPOUNDS

toluene; xylene

METALS

copper; mercury; zinc.

3. Each Respondent is a "person" as defined by Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

4. Respondent Celotex is a present "owner" of most of the industrial portion of the Site, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20). Respondents Celotex and AlliedSignal were each an "owner" and "operator" of a portion of the industrial portion of the Site, as defined by Section 101(20) of CERCLA, at the time of alleged disposal of hazardous substances at the Site. Each Respondent therefore may be liable under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).

5. The conditions described in the Findings of Fact above constitute an actual or threatened "release" of a hazardous substance from the facility into the "environment" as defined by Sections 101(8) and (22) of CERCLA, 42 U.S.C. §§ 9601(8) and (22).

6. Respondents are liable parties as defined in Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), and are subject to this Order under Section 106(a) of CERCLA, 42 U.S.C. §9606(a).

7. The actions required by this Order, if properly performed, are consistent with the NCP, 40 CFR Part 300, as amended, and with CERCLA, and are reasonable and necessary to protect the public health, welfare, and the environment.

V. ORDER

Based upon the foregoing Findings of Fact, Conclusions of Law and Determinations, and the Administrative Record for this Site, it is hereby ordered and agreed that Respondents shall comply with the following provisions, including but not limited to all attachments to this Order, and all documents incorporated by reference into this Order, and perform the following actions:

1. Designation of Contractor, Project Coordinator, and Remedial Project Manager

Respondents shall perform the actions required by this Order themselves or retain (a) contractor(s) to undertake and complete the requirements of this Order. Respondents shall notify U.S. EPA of Respondents' qualifications or the name and qualifications of such contractor(s), whichever is applicable, within 5 business days of the effective date of this Order. Respondents shall also notify U.S. EPA of the name and qualifications of any other contractors retained to perform work under this Order at least 5 business days prior to commencement of such work. U.S. EPA retains the right to disapprove of any of the contractors and/or subcontractors retained by the Respondents. U.S. EPA will not unreasonably withhold approval of contractors proposed by Respondents. If U.S. EPA disapproves a selected contractor, Respondents shall retain a different contractor within 10 business days following U.S. EPA's disapproval, and shall notify U.S. EPA of that contractor's name and qualifications within 15 business days of U.S. EPA's disapproval.

Within 5 business days after the effective date of this Order, the Respondents shall designate a Project Coordinator who shall be responsible for administration of all the Respondents' actions

required by the Order. Respondents shall submit the designated coordinator's name, address, telephone number, and qualifications to U.S. EPA. U.S. EPA retains the right to disapprove of any Project Coordinator named by the Respondents. If U.S. EPA disapproves a selected Project Coordinator, Respondents shall retain a different Project Coordinator within 10 business days following U.S. EPA's disapproval and shall notify U.S. EPA of that person's name and qualifications within 14 business days of U.S. EPA's disapproval. Receipt by Respondents' Project Coordinator of any notice or communication from U.S. EPA relating to this Order shall constitute receipt by all Respondents.

The U.S. EPA has designated Thomas Williams , Remedial Response Branch, Region V, as its Remedial Project Manager ("RPM"). Respondents shall direct all notices, and submissions required by this Order to the RPM at 77 West Jackson Boulevard, SR-6J, Chicago, Illinois 60604-3590, by certified or express mail. Respondents shall also send a copy of all submissions to Karen Peaceman, Assistant Regional Counsel, 77 West Jackson Blvd., CS-29A, Chicago, Illinois, 60604. All Respondents are encouraged to make their submissions to U.S. EPA on recycled paper (which includes significant postconsumer waste paper content where possible) and using two-sided copies.

U.S. EPA and Respondents shall have the right, subject to the immediately preceding paragraph, to change their designated RPM or Project Coordinator. U.S. EPA shall notify the Respondents, and Respondents shall notify U.S. EPA, as early as possible before such a change is made, but in no case less than 24 hours before such a change. The initial notification may be made orally but it shall be promptly followed by a written notice within two business days of oral notification.

2. Work to Be Performed

Respondents shall prepare work plans, conduct additional work in accordance with Section V.2.4, and develop and submit reports to U.S. EPA, including an EE/CA in accordance with the requirements of this Administrative Order, including the attached Scope of Work for Engineering Evaluation/Cost Analysis at the Site, Chicago, Illinois ("SOW"). The SOW is incorporated into and made an enforceable part of this Order. In the event that any Respondent violates this Order, U.S. EPA retains the right to terminate this

Order, conduct Fund-financed actions, and obtain reimbursement from the Respondents for costs incurred in conducting the actions required by this Order.

2.1 Reports, Work Plans and Implementation

The Respondents shall submit the following major deliverables to U.S. EPA under this Order: an EE/CA Work Plan and an EE/CA Report. The schedule for submitting the EE/CA Work Plan is provided for in the attached SOW. The schedule for completion of the EE/CA and submission of the EE/CA Report shall be in the EE/CA Work Plan.

After review of any plan, report or other item which is required to be submitted for approval pursuant to this Order, U.S. EPA shall: (a) approve, in whole or in part, the submission; (b) approve the submission upon specified conditions; (c) disapprove, in whole or in part, the submission, directing that the Respondents modify the submission; or (d) any combination of the above.

In the event of approval or approval upon conditions by U.S. EPA, Respondents shall proceed to take any action required by the plan, report, or other item, as approved by U.S. EPA subject only to their right to invoke the Dispute Resolution procedures set forth in Section VIII (Dispute Resolution) with respect to the conditions made by U.S. EPA. .

Upon receipt of a notice of disapproval pursuant to Section V.2, Respondents shall, within 14 business days or such longer time as specified by U.S. EPA in such notice, correct the deficiencies and resubmit the plan, report, or other item for approval. Any stipulated penalties applicable to the submission, as provided in Section X, shall accrue during the 14-day period or otherwise specified period but shall not be payable unless the resubmission is disapproved due to a material defect.

Notwithstanding the receipt of a notice of disapproval pursuant to Section V.2, Respondents shall proceed, at the direction of U.S. EPA, to take any action required by any non-deficient portion of the submission. Implementation of any non-deficient portion of a submission shall not relieve Respondents of any liability for stipulated penalties under Section X (Stipulated Penalties).

In the event that a resubmitted plan, report or other item, or portion thereof, is disapproved by U.S. EPA, U.S. EPA may again require the Respondents to correct the deficiencies, in accordance with the preceding provisions.

If upon resubmission, a plan, report, or item is disapproved by U.S. EPA due to a material defect, Respondents shall be deemed to have failed to submit such plan, report, or item timely and adequately unless the Respondents invoke the dispute resolution procedures set forth in Section VIII (Dispute Resolution) and U.S. EPA's action is overturned pursuant to that Section. The provisions of Section VIII (Dispute Resolution) and Section X (Stipulated Penalties) shall govern the implementation of the work and accrual and payment of any stipulated penalties during Dispute Resolution. If U.S. EPA's disapproval is upheld, stipulated penalties shall accrue for such violation from the date on which the initial submission was originally required, as provided in Section X.

All plans, reports, and other items required to be submitted to U.S. EPA under this Order shall, upon approval by U.S. EPA, be enforceable under this Order. In the event U.S. EPA approves a portion of a plan, report, or other item required to be submitted to U.S. EPA under this Order, the approved portion shall be enforceable under this Order.

U.S. EPA may approve the Respondents' EE/CA Report contingent upon review of public comments received during the public comment period. Following contingent approval of the EE/CA Report, U.S. EPA will select, in writing, a recommended alternative, including remedial objectives and action levels, which along with the risk assessment approved by U.S. EPA, shall be incorporated into the approved EE/CA Report as submitted by the Respondents. U.S. EPA will publish a notice of availability and conduct a public comment period on the EE/CA with U.S. EPA's recommended response alternative, risk assessment, remedial objectives and cleanup action levels incorporated. Following the public comment period and U.S. EPA's response to significant public comments, in accordance with Section XVII, U.S. EPA will notify the Respondents in writing either that the EE/CA Report is fully approved, or that the Respondents must resubmit it for U.S. EPA's final approval. U.S. EPA will state the reasons for requiring the resubmittal in its written notification. Respondents shall have 21 business days from the date of receipt of U.S. EPA's written notification to resubmit it to U.S. EPA.

Following U.S. EPA approval of the final EE/CA Report, U.S. EPA will issue an Action Memorandum, which will document the U.S. EPA decision on a recommended alternative.

2.2 Quality Assurance and Sampling

All sampling and analyses performed pursuant to this Order shall conform to U.S. EPA direction, approval, and guidance regarding sampling, quality assurance/quality control ("QA/QC"), data validation, and chain of custody procedures. Respondents shall ensure that the laboratory used to perform the analyses participates in a QA/QC program that complies with U.S. EPA guidance.

Upon request by U.S. EPA, Respondents shall have such a laboratory analyze samples submitted by U.S. EPA for quality assurance monitoring. Respondents shall provide to U.S. EPA the quality assurance/quality control procedures followed by all sampling teams and laboratories performing data collection and/or analysis. Respondents shall also ensure provision of analytical tracking information consistent with, at a minimum, OSWER Directive No. 9240.0-2B, "Extending the Tracking of Analytical Services to PRP-

Lead Superfund Sites."

Upon request by U.S. EPA, Respondents shall allow U.S. EPA or its authorized representatives to take split and/or duplicate samples of any samples collected by Respondents or their contractors or agents while performing work under this Order. Respondents shall notify U.S. EPA not less than 5 business days in advance of any sample collection activity. U.S. EPA shall have the right to take any additional samples that it deems necessary. Any costs U.S. EPA incurs in taking such additional samples shall not constitute "Oversight costs" subject to reimbursement under this Order. U.S. EPA shall, where practicable, allow Respondents or their contractors to take split and/or duplicate samples of any such additional samples it takes.

2.3 Reporting

Respondents shall submit monthly written progress reports to U.S. EPA concerning actions undertaken pursuant to this Order, beginning in the first full month following the effective date of this Order, until termination of this Order, unless otherwise directed in writing by the RPM. The monthly progress report for each month shall be submitted by the 20th day of the following month. These reports shall describe all significant developments during the preceding period, including the work performed and any problems encountered, analytical data received during the reporting period, and developments anticipated during the next reporting period, including a schedule of work to be performed, anticipated problems, and planned resolutions of past or anticipated problems.

Any Respondent that owns any portion of the Site shall, at least 30 days prior to the conveyance of any interest in real property at the Site, give written notice of this Order to the transferee and written notice of the proposed conveyance to U.S. EPA and the State. The notice to U.S. EPA and the State shall include the name and address of the transferee. The party conveying such an interest shall require that the transferee will provide access as described in Section V.3 (Access to Property and Information).

2.4 Additional Work

In the event that the U.S. EPA or the Respondents determine that additional work, including EE/CA support sampling and/or an

engineering evaluation, is reasonably necessary to accomplish the objectives of this Order, notification of such additional work shall be provided to the other parties in writing. Any additional work which Respondents determine to be necessary shall be subject to U.S. EPA's written approval prior to commencement of the additional work. Respondents shall complete, in accordance with standards, specifications, and schedules U.S. EPA has approved, any additional work Respondents have proposed, and which U.S. EPA has approved in writing or that U.S. EPA has determined to be necessary, and has provided written notice of pursuant to this paragraph.

3. Access to Property and Information

Respondents shall provide or obtain access to the Site and off-site areas to which access is necessary to implement this Order, and shall provide access to all records and documentation related to the conditions at the Site and the actions conducted pursuant to this Order. Such access shall be provided to U.S. EPA employees, contractors, agents, consultants, designees, representatives, and State of Illinois representatives. These individuals shall be permitted to move freely at the Site and appropriate off-site areas to which Respondents have access in order to conduct actions which U.S. EPA determines to be necessary. Where practicable, U.S. EPA or its representatives, will attempt to notify Celotex when it intends to enter property owned by Celotex. If such entry is for a period of several days or weeks, such notice will only be given once. Respondents shall submit to U.S. EPA, upon request, the results of all sampling or tests and all other data generated by Respondents or their contractor(s), or on the Respondents' behalf during implementation of this Order.

Where work under this Order is to be performed in areas owned by or in possession of someone other than Respondents, Respondents shall use their best efforts to obtain all necessary access agreements within 14 calendar days after the effective date of this Order, or as otherwise specified in writing by the RPM. Respondents shall notify U.S. EPA within 2 business days if, after using their best efforts, they are unable to obtain such agreements. Respondents shall describe in writing their efforts to obtain access. U.S. EPA may, in its discretion, then assist Respondents in gaining access, to the extent necessary to effectuate the actions described herein, using such means as U.S. EPA deems appropriate. Respondents shall

reimburse U.S. EPA for all costs and attorneys fees incurred by the United States in obtaining such access.

4. Record Retention, Documentation, Availability of Information

Respondents shall preserve all documents and information in their possession relating to work performed under this Order, or relating to the hazardous substances found on or released from the Site, for six years following completion of the actions required by this Order. At the end of this six year period and at least 60 days before any document or information is destroyed, Respondents shall notify U.S. EPA that such documents and information are available to U.S. EPA for inspection, and upon request, shall provide the originals or copies of such documents and information to U.S. EPA. In addition, Respondents shall provide copies of documents and information retained under this Section at any time before expiration of the six year period at the written request of U.S. EPA.

5. Compliance With Other Laws

Respondents shall perform all activities required pursuant to this Order in accordance with all the requirements of all applicable federal and state laws and regulations. In accordance with 40 CFR Section 300.415(I), all on-site actions required pursuant to this Order shall, to the extent practicable, as determined by U.S. EPA, considering the exigencies of the situation, attain applicable or relevant and appropriate requirements under federal environmental or state environmental or facility siting laws.

Except as provided in Section 121(e) of CERCLA and the NCP, no permit shall be required for any portion of the activities conducted entirely on-site. Where any portion of the activities requires a federal or state permit or approval, the Respondents shall submit timely applications and take all other actions necessary to obtain and to comply with all such permits or approvals. This Order is not, and shall not be construed to be, a permit issued pursuant to any federal or state statute or regulation.

U.S. EPA has determined that the activities contemplated by this Order are consistent with the NCP.

6. Emergency Response and Notification of Releases

If any incident, or change in Site conditions, during the activities conducted pursuant to this Order causes or threatens to cause an additional release of hazardous substances from the Site or an endangerment to the public health, welfare, or the environment, the Respondents shall immediately take all appropriate action to prevent, abate or minimize such release or endangerment caused or threatened by the release. Respondents shall also immediately notify the RPM or, in the event of his/her unavailability, shall notify the Regional Duty Officer, Emergency Response Branch, Region 5 at (312) 353-2318, of the incident or Site conditions. If Respondents fail to respond, U.S. EPA may respond to the release or endangerment and reserve the right to recover costs associated with that response. Respondents reserve all rights to which they are entitled to defend any such actions or claims.

Respondents shall submit a written report to U.S. EPA within 7 business days after each release, setting forth the events that occurred and the measures taken or to be taken to mitigate any release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release. Respondents shall also comply with any other notification requirements, including those in CERCLA Section 103, 42 U.S.C. § 9603, and Section 304 of the Emergency Planning and Community Right-To-Know Act, 42 U.S.C. § 11004.

VI. AUTHORITY OF THE U.S. EPA REMEDIAL PROJECT MANAGER

The RPM shall be responsible for overseeing the implementation of this Order. The RPM shall have the authority vested in an RPM by the NCP, including the authority to halt, conduct, or direct any activities required by this Order, or to direct any other response action undertaken by U.S. EPA or Respondents at the Site. Absence of the RPM from the Site shall not be cause for stoppage of work unless specifically directed by the RPM.

VII. REIMBURSEMENT OF COSTS

U.S. EPA reserves its right to recover all past response costs of the United States related to the Site that are not inconsistent

with the NCP. "Past response costs" are all costs, including, but not limited to, direct and indirect costs and interest, that the United States, its employees, agents, contractors, consultants, and other authorized representatives incurred and paid with regard to the Site prior to January 31, 1996.

Respondents shall pay all oversight costs of the United States related to the Site that are not inconsistent with the NCP. U.S. EPA will send Respondents a bill for future "oversight costs" on an annual basis. "Oversight costs" are all costs, including, but not limited to, direct and indirect costs, that the United States incurs in reviewing or developing plans, reports and other items pursuant to this Order, overseeing response actions, overseeing compliance with this Order, and enforcing this Order. "Oversight costs" shall also include all costs, including direct and indirect costs, incurred and paid by the United States in connection with the Site between January 31, 1996 and the effective date of this Order.

Respondents shall, within 30 calendar days of receipt of a bill, remit a check for the amount of the bill made payable to the "Hazardous Substance Superfund," to the following address:

U.S. Environmental Protection Agency
Superfund Accounting
P.O. Box 70753
Chicago, Illinois 60673

Respondents shall simultaneously transmit a copy of the check to the Director, Waste Management Division, U.S. EPA Region 5, 77 West Jackson Blvd., Chicago, Illinois, 60604-3590. Payments shall be designated as "Response Costs - 2800 S. Sacramento Avenue Site" and shall reference the payers' name and address, the EPA site identification number (5Q), and the docket number of this Order.

In the event that any payment is not made within the deadlines described above, Respondents shall pay interest on the unpaid balance. Interest is established at the rate specified in Section 107(a) of CERCLA, 42 U.S.C. § 9607(a). The interest shall begin to accrue on the date of the Respondents' receipt of the bill. Interest shall accrue at the rate specified through the date of the payment. Payments of interest made under this paragraph shall be in addition to such other remedies or sanctions available to the

United States by virtue of Respondents' failure to make timely payments under this Section.

If any dispute over costs is resolved before payment is due, the amount due will be adjusted as necessary. If the dispute is not resolved before payment is due, Respondents shall pay the full amount of the uncontested costs into the Hazardous Substance Fund as specified above on or before the due date. Within the same time period, Respondents shall pay the full amount of the contested costs into an interest-bearing escrow account. Respondents shall simultaneously transmit a copy of both checks to the RPM. Respondents shall ensure that the prevailing party or parties in the dispute shall receive the amount upon which they prevailed from the escrow funds plus interest within 20 calendar days after the dispute is resolved.

VIII. DISPUTE RESOLUTION

The parties to this Order shall attempt to resolve, expeditiously and informally, any disagreements concerning this Order, provided however, that final cleanup objectives and cleanup action levels are not subject to dispute resolution.

If a Respondent objects to any U.S. EPA action taken pursuant to this Order, including, but not limited to, billings for response costs, that Respondent shall notify U.S. EPA in writing of its objection within 15 business days of such action, unless the objection has been informally resolved. This written notice shall include a statement of the issues in dispute, the relevant facts upon which the dispute is based, all factual data, analysis or opinion supporting Respondent's position, and all supporting documentation on which the Respondent relies (hereinafter the "Statement of Position").

U.S. EPA and Respondents shall within 15 business days of U.S. EPA's receipt of the Respondents' Statement of Position, attempt to resolve the dispute through formal negotiations (Negotiation Period). The Negotiation Period may be extended at the sole discretion of U.S. EPA. U.S. EPA's decision regarding an extension of the Negotiation Period shall not constitute a U.S. EPA action subject to dispute resolution or a final Agency action giving rise to judicial review.

An administrative record of any dispute under this Section shall be maintained by U.S. EPA. The record shall include the written notification of such dispute, and the Statement of Position served pursuant to the preceding paragraph.

Any agreement reached by the parties pursuant to this Section shall be in writing, signed by all parties, and shall upon the signature by the parties be incorporated into and become an enforceable element of this Order. If the parties are unable to reach an agreement within the Negotiation Period, U.S. EPA will issue a written decision on the dispute to the Respondents ("U.S. EPA Dispute Decision"). The U.S. EPA Dispute Decision shall be incorporated into and become an enforceable element of this Order upon Respondents' receipt of the U.S. EPA Dispute Decision unless the Respondents request Mediation in accordance with the provisions below.

Respondents may request Mediation within five (5) business days of issuance of the U.S. EPA Dispute Decision only if the dispute concerns the Risk Assessment required by Section IV of the SOW or the EE/CA Reports required by Section V of the SOW ("mediation matters"). Within five (5) business days of receipt of notice that Respondents are requesting Mediation, U.S. EPA will provide written notification to Respondents of its acceptance or rejection of Mediation. U.S. EPA shall have the right to reject Respondents' request for Mediation, if U.S. EPA, in its sole discretion, believes that the dispute is substantively the same dispute which has previously been the subject of Mediation pursuant to this Order, if the dispute is not a "mediation matter" or U.S. EPA does not have available funds to pay its share of Mediation costs. U.S. EPA's decision to reject Respondents' request for Mediation shall not be subject to dispute resolution or judicial review. If U.S. EPA accepts Mediation, the parties agree to follow the procedures below.

The parties agree that they will share equitably the costs of mediation, provided, however, that the costs incurred by U.S. EPA will be reimbursable. The U.S. EPA Project Manager shall notify the Respondents as to the extent to U.S. EPA's ability to share equitably the costs of mediation within five business days of U.S. EPA's receipt of the Respondents' request for mediation. This time period may be extended by U.S. EPA to facilitate the ability of parties to share the costs of mediation. U.S. EPA's ability to

share the costs of mediation will be determined by U.S. EPA in its sole discretion and shall not be subject to dispute resolution and shall not constitute final agency action for purposes of judicial review. Upon written notice by the U.S. EPA Project Manager to the Respondents that U.S. EPA cannot share equitably the costs of mediation the U.S. EPA Dispute Decision shall be binding upon the Respondents. If U.S. EPA notifies the Respondents that it can equitably share the expenses of mediation, U.S. EPA will forward a list of Mediators to Respondents ("Mediator Selection List"). The parties agree to select a Mediator in accordance with the following procedures: (a) Mediators on the Mediation Selection List shall be deemed accepted by the Respondents, unless, within five (5) business days of receipt of the Mediation Selection List, Respondents notify U.S. EPA of their objection(s); (b) within five (5) days of Respondents' receipt of the Mediator Selection List, the parties shall simultaneously provide each other with a letter ("Mediation Nomination Letter") which shall contain the names of persons from the Mediator Selection List nominated to serve as mediators for the matter in dispute; (c) the mediators nominated by each party must not have had any past, present, or planned future business relationships with the parties, other than for mediation activities. They must also agree to the terms and conditions for mediation contained in this Order and enter into an agreement for the provision of mediation services with the parties. All persons nominated shall be provided with a copy of the Order by the nominating party. Any conflicts of interest or refusal to comply with these procedures shall automatically result in rejection of said nominee; (d) within five (5) business days of the receipt of the Mediation Nomination Letters, each party shall advise the other in writing of acceptable nominees. All acceptable nominees who are not automatically rejected pursuant to subparagraph (c) above, shall comprise the Mediator Nomination List. The parties shall select a mediator from the Mediator Nomination List and enter into an agreement for mediation services with such mediator through negotiation and by mutual consent within 20 days of the receipt of the Mediation Nomination Letters. Alternatively, the parties may select a mediator from any other source of mediators. In this event the provisions above shall continue in effect.

The parties agree that the time period for mediation of the matter in dispute is limited to thirty days from the date the parties sign an agreement with a Mediator. This time period may be extended by U.S. EPA in its sole discretion. Any decision not to extend the

time period for mediation will not be the subject of mediation, dispute resolution or constitute a final action for purposes of judicial review.

If for any reason the parties are unable to select a mediator, or are unable to approve and execute an agreement for mediation services, or are unable to settle the dispute through mediation services, within the time periods for those activities specified in the paragraphs above, U.S. EPA's Dispute Decision shall be incorporated into and shall become an enforceable element of this Order upon the conclusion of such time period, but will not be considered final Agency action for purposes of judicial review.

Unless the parties agree otherwise in writing, the mediator's role shall be limited to facilitating negotiation between the parties. Mediation sessions shall not be recorded verbatim and no formal minutes or transcripts shall be maintained. Unless the parties agree otherwise, the mediators shall make no written findings or recommendations.

Meetings or conferences with the mediator shall be treated as confidential settlement negotiations. Statements made by any person during any such meetings or conferences shall be deemed to have been made in compromise negotiations within the meaning of Rule 408 of the Federal Rules of Evidence and applicable state rules of evidence, and shall not be offered in evidence in any proceeding by any person. The mediator will be disqualified as witness, consultant or expert in any proceeding or future action relating to the subject matter of the mediation, including those between persons not a party to the mediation. No written notes or reports of the mediator may be admissible in evidence in any subsequent proceeding. If Respondents fail to comply with the mediation confidentiality requirements of this section, then they will forfeit their rights, if any remain, under this Order to request future Mediation.

Any agreement to resolve the dispute reached by the parties pursuant to this section shall be in writing and shall be signed by all parties. The written agreement shall specify which provisions of the U.S. EPA Dispute Decision are superseded and/or modified. If the written agreement is not signed by the Respondents within seven days after the resolution of the dispute it shall be null and void and the U.S. EPA Dispute Decision shall be incorporated into

and become an enforceable element of this Order.

Respondents' obligations under this Order shall not be tolled by submission of any objection for dispute resolution or Mediation under this Section. Following resolution of the dispute, as provided by this Section, a Respondent shall fulfill the requirement that was the subject of the dispute in accordance with the agreement reached or with U.S. EPA's decision, whichever occurs. No U.S. EPA decision made pursuant to this Section shall constitute a final Agency action giving rise to judicial review.

IX. FORCE MAJEURE

Respondents agree to perform all requirements under this Order within the time limits established under this Order, unless the performance is delayed by a force majeure. For purposes of this Order, a force majeure is defined as any event arising from causes beyond the control of Respondents or of any entity controlled by Respondents, including but not limited to their contractors and subcontractors, that delays or prevents performance of any obligation under this Order despite Respondents' best efforts to fulfill the obligation. Force majeure does not include financial inability to complete the work or increased cost of performance.

Respondents shall notify U.S. EPA orally within 48 hours after Respondents become aware of any event that Respondents contend constitute a force majeure, and in writing within 5 business days after the Respondents become aware of any events which constitute a force majeure. Such notice shall: identify the event causing the delay or anticipated delay; estimate the anticipated length of delay, including necessary demobilization and re-mobilization; state the measures taken or to be taken to minimize any delays; and estimate the timetable for implementation of the measures. Respondents shall take all reasonable measures to avoid and minimize the delays. Failure to comply with the notice provision of this Section shall be grounds for U.S. EPA to deny Respondents an extension of time for performance. Respondents shall have the burden of demonstrating by a preponderance of the evidence that the event is a force majeure, that the delay is warranted under the circumstances, and that best efforts were exercised to avoid and mitigate the effects of the delay.

If U.S. EPA determines a delay in performance of a requirement under this Order is or was attributable to a force majeure, the time period for performance of that requirement shall be extended as deemed necessary by U.S. EPA. Such an extension shall not alter Respondents' obligation to perform or complete other tasks required by the Order which are not directly affected by the force majeure.

X. STIPULATED AND STATUTORY PENALTIES

For each calendar day, or portion thereof, that Respondents fail to fully perform any requirement of this Order in accordance with the schedule established pursuant to this Order, Respondents shall be liable as follows:

<u>Deliverable/Activity</u>	<u>Penalty For Days 1-7</u>	<u>Penalty For > 7 Days</u>
Failure to Submit any Plan or Report Required by the SOW	\$ 250/Day	\$ 750/Day
Failure to Submit an Approvable Revised Plan or Report Required by the SOW	\$ 250/Day	\$ 750/Day
Late Submittal of Monthly Progress Reports	\$ 100/Day	\$ 250/Day
Failure to Meet any Other Deadline Required by the Order or by Documents Required by the Order	\$ 100/Day	\$ 100/Day

Upon receipt of written demand by U.S. EPA, Respondents shall make payment to U.S. EPA within 20 calendar days and interest shall accrue on late payments in accordance with Section VII of this Order (Reimbursement of Costs). Celotex' obligation under this paragraph is subject to the approval of the Bankruptcy Court.

Even if violations are simultaneous, separate penalties shall

accrue for separate violations of this Order. Penalties accrue and are assessed per violation per day. Penalties shall accrue regardless of whether U.S. EPA has notified Respondents of a violation or act of noncompliance. The payment of penalties shall not alter in any way Respondents' obligations to complete the performance of the work required under this Order. Stipulated penalties shall accrue, but need not be paid, during any dispute resolution period concerning the particular penalties at issue. If Respondents prevail upon resolution, Respondents shall pay only such penalties as the resolution requires.

The stipulated penalties set forth above shall not be the sole or exclusive remedy for violations of this Order. Violation of any provision of this Order may subject Respondents to civil penalties of up to twenty-five thousand dollars (\$25,000) per violation per day, as provided in Section 106(b)(1) of CERCLA, 42 U.S.C. § 9606(b)(1). Respondents may also be subject to punitive damages in an amount up to three times the amount of any cost incurred by the United States as a result of such violation, as provided in Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3). Should Respondents violate this Order or any portion hereof, U.S. EPA may carry out the required actions unilaterally, pursuant to Section 104 of CERCLA, 42 U.S.C. § 9604, and/or may seek judicial enforcement of this Order pursuant to Section 106 of CERCLA, 42 U.S.C. § 9606.

XI. RESERVATION OF RIGHTS

Except as specifically provided in this Order, nothing herein shall limit the power and authority of U.S. EPA or the United States to take, direct, or order all actions necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants or contaminants, or hazardous or solid waste on, at, or from the Site. Further, nothing herein shall prevent U.S. EPA from seeking legal or equitable relief to enforce the terms of this Order. U.S. EPA also reserves the right to take any other legal or equitable action as it deems appropriate and necessary, or to require the Respondents in the future to perform additional activities pursuant to CERCLA or any other applicable law. Respondents reserve all rights to which they are entitled to defend any such actions or claims.

sue or to take administrative action against Respondents under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), for recovery of past response costs incurred by the United States in connection with this action or this Order. This covenant not to sue shall take effect upon the receipt by U.S. EPA of the payments required by Section VIII (Reimbursement of Costs).

These covenants not to sue are conditioned upon the complete and satisfactory performance by Respondents of their obligations under this Order. These covenants not to sue extend only to the Respondents and do not extend to any other person.

XIV. CONTRIBUTION PROTECTION

With regard to claims for contribution against Respondents for matters addressed in this Order, the Parties hereto agree that the Respondents are entitled to protection from contribution actions or claims to the extent provided by Section 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. §§ 9613(f)(2) and 9622(h)(4).

Nothing in this Order precludes Parties from asserting any claims, causes of action or demands against any persons not parties to this Order for indemnification, contribution, or cost recovery.

XV. INDEMNIFICATION

Respondents agree to indemnify, save and hold harmless the United States, its officials, agents, contractors, subcontractors, employees and representatives from any and all claims or causes of action: (A) arising from, or on account of, acts or omissions of Respondents and Respondents' officers, heirs, directors, employees, agents, contractors, subcontractors, receivers, trustees, successors or assigns, in carrying out actions pursuant to this Order; and (B) for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between (any one or more of) Respondents, and any persons for performance of work on or relating to the Site, including claims on account of construction delays. Nothing in this Order, however, requires indemnification by Respondents for any claim or cause of action against the United States based on negligent action taken solely and directly by U.S. EPA (not including oversight or approval of plans or activities of the Respondents).

XII. OTHER CLAIMS

By issuance of this Order, the United States and U.S. EPA assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondents. The United States or U.S. EPA shall not be a party or be held out as a party to any contract entered into by the Respondents or their directors, officers, employees, agents, successors, representatives, assigns, contractors, or consultants in carrying out activities pursuant to this Order.

Except as expressly provided in Section XIII (Covenant Not To Sue), nothing in this Order constitutes a satisfaction of or release from any claim or cause of action against the Respondents or any person not a party to this Order, for any liability such person may have under CERCLA, other statutes, or the common law, including but not limited to any claims of the United States for costs, damages and interest under Sections 106(a) or 107(a) of CERCLA, 42 U.S.C. §§ 9606(a), 9607(a).

This Order does not constitute a preauthorization of funds under Section 111(a)(2) of CERCLA, 42 U.S.C. § 9611(a)(2). The Respondents waive any claim to payment under Sections 106(b), 111, and 112 of CERCLA, 42 U.S.C. §§ 9606(b), 9611, and 9612, against the United States or the Hazardous Substance Superfund arising out of any action performed under this Order.

XIII. COVENANT NOT TO SUE

Except as otherwise specifically provided in this Order, upon issuance of the U.S. EPA notice referred to in Section XVII (Notice of Completion), U.S. EPA covenants not to sue Respondents for judicial imposition of damages or civil penalties or to take administrative action against Respondents for any failure to perform actions agreed to in this Order except as otherwise reserved herein.

Except as otherwise specifically provided in this Order, in consideration and upon Respondents' payment of the response costs specified in Section VIII of this Order, U.S. EPA covenants not to

XVI. MODIFICATIONS

Except as otherwise specified in Sections V.2. and V.2.1 (Work To Be Performed and EE/CA Report), if any party believes modifications to any plan or schedule are necessary during the course of this project, they shall conduct informal discussions regarding such modifications with the other parties. Any agreed-upon modifications to any plan or schedule shall be memorialized in writing within 7 business days; however, the effective date of the modification shall be the date of the RPM's oral direction. Any other requirements of this Order may be modified in writing by mutual agreement of the parties. Any modification to this Order shall be incorporated into and made an enforceable part of this Order.

If Respondents seek permission to deviate from any approved plan or schedule, Respondents' Project Coordinator shall submit a written request to U.S. EPA for approval outlining the proposed modification and its basis.

No informal advice, guidance, suggestion, or comment by U.S. EPA regarding reports, plans, specifications, schedules, or any other writing submitted by the Respondents shall relieve Respondents of their the obligations to obtain such formal approval as may be required by this Order, and to comply with all requirements of this Order unless it is formally modified.

XVII. PUBLIC COMMENT AND COMMUNITY RELATIONS

Respondents shall assist U.S. EPA, when requested, in fulfilling the community relations requirements of the NCP, 40 CFR § 300.415(m). This assistance shall include providing information to the public regarding the Work to be performed at the Site specified in subsection V.2. of this Order.

U.S. EPA will provide the public with an opportunity to review and comment on an EE/CA prepared for the Site, and to review the administrative record for the Site, as provided for by 40 CFR § 300.415(m)(4) and 300.820. Following the public comment period, U.S. EPA will respond, as appropriate, to all significant comments received from the public and shall determine whether those comments

necessitate modification of that EE/CA.

XVIII. NOTICE OF COMPLETION

When U.S. EPA determines, after U.S. EPA's review of all final reports, that all work has been fully performed in accordance with this Order, except for certain continuing obligations required by this Order (e.g., record retention, payment of costs), U.S. EPA will provide written notice to the Respondents. If U.S. EPA determines that any activities have not been completed in accordance with this Order, U.S. EPA will notify the Respondents, provide a list of the deficiencies and required modifications, and require that Respondents modify the work if appropriate to correct such deficiencies, and submit a final report to U.S. EPA on the modifications. Failure to implement the modifications in accordance with U.S. EPA's required modifications shall be a violation of this Order.

XIX. SEVERABILITY

If a court issues an order that invalidates any provision of this Order or finds that Respondents have sufficient cause not to comply with one or more provisions of this Order, Respondents shall remain bound to comply with all provisions of this Order not invalidated by the court's order.

XX. NO ADMISSIONS

Respondents have agreed to this Order to further the public interest in avoiding unnecessary conflict between the Parties. Except as provided in Section III, by entering into this Order, or by taking any action in accordance with it, Respondents do not admit any of the findings of fact, conclusions of law, determinations, or any of the allegations contained herein. Respondents do not admit liability or admit any issues of law or fact or any responsibility for the alleged release or threat of release of any hazardous substances into the environment. The participation of any Respondent in this Order shall not be admissible against any Respondent in any judicial or administrative proceeding, except in an action by U.S. EPA to enforce the terms of this Order, or in actions to which U.S. EPA is a party which allege

injury based, in whole or in part, on acts or omissions of Respondents in connection with performance under this Order.

By signing and consenting to this Order or by taking any actions pursuant hereto, Respondents do not concede that any investigation or action at the Site is necessary to protect the public health or welfare or the environment, or for any other reason; that the methodologies or protocols prescribed by the applicable U.S. EPA guidance or described or noted herein or otherwise required by U.S. EPA for performance of work pursuant hereto are the only ones appropriate for the proper conduct of such work; or that a release or threatened release of hazardous waste or substance at the Site may present an imminent and substantial endangerment to the public health or welfare or to the environment.

XIX. EFFECTIVE DATE

This Order shall be effective upon signature by the Director, Waste Management Division, U.S. EPA Region 5.

IN THE MATTER OF:

~~Celadex Site~~

2800 South Sacramento Avenue Site
Chicago, Illinois

SIGNATORIES

Each undersigned representative of a signatory to this Administrative Order on Consent certifies that he or she is fully authorized to enter into the terms and conditions of this Order and to bind such signatory, its directors, officers, employees, agents, successors and assigns, to this document.

Agreed this 20th day of September, 1996.

By Paul H. Arbesman
Paul H. Arbesman, Leader
Remediation & Evaluation Services

IT IS SO ORDERED AND AGREED

BY: William E. Muno
William E. Muno, Director
Waste Management Division
United States Environmental Protection Agency
Region V

DATE: 11/1/96

IN THE MATTER OF:

~~XXXXXXXXXX~~

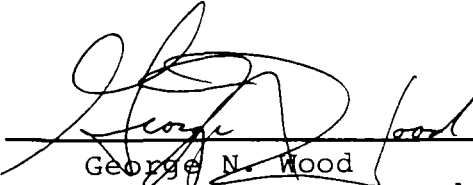
2800 South Sacramento Avenue Site
Chicago, Illinois

SIGNATORIES

Each undersigned representative of a signatory to this Administrative Order on Consent certifies that he or she is fully authorized to enter into the terms and conditions of this Order and to bind such signatory, its directors, officers, employees, agents, successors and assigns, to this document.

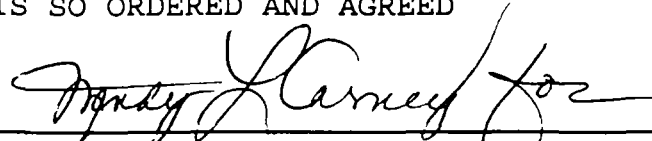
Agreed this 22d day of October, 1996.

By


George N. Wood
Vice President & General Counsel
The Celotex Corporation

IT IS SO ORDERED AND AGREED

BY:


William E. Muno, Director
Waste Management Division
United States Environmental Protection Agency
Region V

DATE: 11/1/96

**SCOPE OF WORK FOR ENGINEERING EVALUATION/COST ANALYSIS
AT
2800 S. SACRAMENTO AVENUE SITE, CHICAGO, ILLINOIS**

PURPOSE:

The purpose of this Scope of Work (SOW) for the 2800 S. Sacramento Avenue Site (Site) is as follows:

Conduct an Engineering Evaluation/Cost Analysis (EE/CA) to address contamination at the Site. The sampling and risk assessment work that has been completed to date on the residential soil contamination should be incorporated into the EE/CA.

The EE/CA shall evaluate alternatives for conducting removal actions at the Site. In order to complete the EE/CA, support sampling shall be conducted to characterize the physical characteristics of the Site, identify the sources of contamination, determine the nature and extent of contamination, and identify potential contaminant migration routes. Respondents shall furnish all personnel, materials, and services necessary for, or incidental to, performing the EE/CA, except as specified herein. U.S. EPA will also identify cleanup objectives and cleanup action levels. Based on the site information, cleanup objectives and cleanup action levels, the Respondents shall evaluate alternatives for removal actions to meet the cleanup objectives and cleanup action levels, and address the risks.

SCOPE:

I. Prepare a Work Plan:

Within 30 days of the effective date of the Consent Order, the Respondents shall submit a Work Plan to U.S. EPA for completion of the EE/CA. The Work Plan shall define the overall approach to the project, and establish deadlines for completion of all important tasks including conducting sampling activities, and submission of reports on risk assessment, data, and the EE/CA. The Work Plan should explain how the information from the completed residential soil sampling and risk assessment will be used, to expedite taking a response action to address risks from the residential soil contamination.

II. Prepare EE/CA Support Sampling Plan:

Within 60 calendar days of the effective date of the Administrative Order, Respondents shall submit an EE/CA Support Sampling Plan to address all remaining data acquisition activities that are necessary to characterize human health and environmental risks from the Site, and to evaluate alternative removal actions for addressing these risks. The Support Sampling

Plan shall include sufficient sampling to characterize the source, determine the extent of contamination, and evaluate of all potential migration routes from the Site.

The EE/CA Support Sampling Plan shall include the following:

A. Site Background

A brief summary of the Site location, general Site physiography, hydrology and geology shall be included. A description of the data already available shall be included which will highlight the areas of known contamination and the levels detected. Tables shall be included to display the minimum and maximum levels of detected contaminants across the Site.

B. Data Gap Description

Respondents shall make an analysis of the currently available data to determine the areas of the Site which require additional data in order to define the extent of contamination. This shall include identification of the data requirements needed to evaluate specific remedial technologies that may be included in the EE/CA.

U.S. EPA has determined that at least the following additional activities are needed to characterize the Site:

1. Sampling on the 2800 S. Sacramento property to characterize the remaining contaminant source. This should include sampling of the existing cover, historic surface soils and soil and material that lie below the Site cover. Sampling and investigation should be concentrated in locations of historical hot spots, some of which will be identified by governmental personnel.
2. Sampling sediments in the inlet to the Chicago Sanitary and Ship Canal to detect the presence and extent of sediment contamination in this inlet, and obtain information on the physical properties of the sediments;
3. Ground water sampling to determine the presence and extent of ground water contamination;
4. Sampling areas that may be in surface water run-off routes from the Site to determine the presence and extent of contamination due to surface water run-off.
5. Conducting a phased hydrogeological investigation to evaluate the subsurface geology and characteristics of the water bearing formations to the extent necessary

for the EE/CA. This study may include defining the Site hydrostratigraphy, controlling geologic features, zones of preferential groundwater transmission, the distribution of hydraulic heads within the water bearing formations. The results of this study will be combined with the existing site data described in the preliminary site evaluation report, and the results of the source characterization, to define the groundwater flow patterns and to predict the vertical and lateral extent of contaminant migration.

6. Preparing an accurate topographic map of appropriate working scale. A base map of the Site with a scale of 1 inch to 100 feet (1" - 100') and 2-foot contour intervals will be prepared from this topographic map. The base map will illustrate the locations of wetland areas, floodplains, water features, drainage patterns, tanks, buildings, utilities, paved areas, easements, right-of-ways, and other pertinent features. Larger scale maps will be produced from the base map as necessary.
7. Evaluating drainage patterns and runoff characteristics for potential erosional transport. This should include an evaluation of the potential for the existing Site cover to cause flooding of nearby residences.
8. Evaluating physical characteristics of the existing and historical Site soils to determine the potential for surface water run-off and airborne particle transport.
9. Preparing a grid overlay for the base map. This grid plan will show the location of existing monitoring wells, sampling locations, and water supply wells. These maps will require surveying to establish horizontal and vertical controls for sites of the work relative to the National Geodetic Vertical Datum of 1929.
10. Assembling a legal description of the Site from existing county and township records and results of the Site survey.
11. Reviewing and verifying in the field the legal description of the property. The intent is not to perform a boundary survey, but to locate the boundaries so that future activities do not carry over onto adjacent property without proper permission.
12. Making the necessary arrangements to guarantee access to the Site and surrounding parcels. These arrangements will include negotiating access agreements with landowners and obtaining demarcation clearance for

all buried utilities and construction of access roads.

13. Constructing support facilities and/or procuring the equipment necessary to perform a hazardous site investigation. This includes preparation of decontamination facilities, utility hook-ups, and Site access control stations.

C. Sampling, Investigation, Analytical Procedures, and Data Validation

The Plan shall include a statement of sampling objectives, and a description of sampling procedures, numbers of samples, sample locations and depths, custody procedures, equipment specifications, parameters, decontamination procedures, sample documentation and management, and analytical procedures.

The plan shall identify all laboratories that shall conduct the analyses and the data quality objectives of the analyses. The analyses shall either be conducted in accordance with the analytical, custody, and documentation procedures required in the U.S. EPA Contract Laboratory Program, or alternative procedures must be approved by U.S. EPA. For each analysis for which an alternative procedure is requested, a step by step standard operating procedure must be included in the Sampling Plan. The Plan shall provide for all data generated under the Plan to be validated using the most recent relevant Region V, U.S. EPA data validation guidelines.

D. Health and Safety Plan

Respondents shall update the existing Health and Safety Plan or provide a new Health and Safety Plan to address the addition field activities. The Health and Safety Plan shall, at a minimum, follow the U.S. EPA guidance document, Standard Operating Safety Guides (U.S. EPA, Publication 9285.1-03, June 1992), and all relevant OSHA requirements (see 29 CFR 1910).

E. Schedule

Respondents shall include a schedule which identifies specific dates for initiation and completion of all tasks to be completed as part of this EE/CA Support Sampling Plan.

III. Conduct Data Collection Activities in Accordance with the Approved EE/CA Support Sampling Plan.

Respondents shall conduct data collection activities in

accordance to the U.S. EPA approved Support Sampling Plan, including the schedule. Respondents shall coordinate activities with U.S. EPA's Remedial Project Manager.

IV. PREPARE DATA REPORT(s)

According to the U.S. EPA-approved schedule in the Work Plan, Data Report(s) shall be provided by Respondents to U.S. EPA.

The Data Report shall summarize the results from the data collection activities from both the EE/CA Support Sampling and from previous sampling events. The Data Report shall include a Site characterization to summarize available data on the chemical, physical, demographic, and other characteristics of the Site and the surrounding areas. A copy of all data packages and data validation reports shall be provided by Respondents to U.S. EPA for a validation check.

Specific topics which shall be addressed in the Data Reports shall include:

1. Site Description and Background: The Site description includes current and historical information. It shall describe present and past facility operations. It shall include a description of previous actions taken to remove, control or treat hazardous substances at the Site, including information on: the scope and objectives of the previous action; the dates and time periods over which the removal action was taken; the nature and extent of hazardous substances, pollutants, or contaminants treated or controlled during the action; and technologies used and action levels used for the action.
2. Site Characterization, including:
 - a. Site Location and Physical Setting
 - b. Geology/Hydrology/Hydraulics
 - c. Surrounding Land Use and Populations
 - d. Sensitive Ecosystems
 - e. Meteorology
3. Analytical Data: This section shall present the available data in tabular and graphic form in order to display and characterize the source, nature and extent of contamination. This shall include the physical data. It shall include the base map showing sampling locations, topographic maps, maps showing ground water potentiometric surface and flow direction, maps showing geologic cross sections, and maps showing the distribution of contamination. The distribution of contamination maps shall display the distribution of at least the following parameters: cumulative PAHs; benzo(a)pyrene; and benzo(a)pyrene equivalents.

IV. CONDUCT RISK ASSESSMENT

The Respondents shall conduct a risk assessment in accordance with the procedures defined in the "Risk Assessment for Superfund, Volume 1, Human Health Evaluation Manual", EPA/540/1-89/002 to assess any risks or potential risks from contamination on the Site or that may have been caused by the Site. For on-site contamination, the risk assessment shall evaluate the risks from future development of the Site. Respondents may propose cleanup objectives and cleanup action levels for each media of concern. U.S. EPA will develop cleanup objectives and cleanup action levels for each media of concern. U.S. EPA's cleanup action levels and cleanup objectives will be provided to the Respondents. These cleanup objectives and cleanup action levels may apply to ground water, sediments, source control and other media.

V. PREPARE REPORT

Within 60 days of receipt of any cleanup action levels and/or cleanup objectives from U.S. EPA, the Respondents shall prepare an EE/CA address attainment of these cleanup action levels and/or cleanup objectives. If possible, action to address the residential soil contamination will be expedited, and so may precede actions to address the other contamination. The goal of the EE/CA is to provide information to U.S. EPA for selection of removal actions to address contamination at the Site under the non-time critical authority of the National Contingency Plan which would be consistent with final remediation of the Site. The EE/CA shall be completed in accordance with the format and directions in the EE/CA Work Plan in Attachment 1.

2800 S. Sacramento

ENGINEERING EVALUATION/COST ANALYSIS WORK PLAN

- 1 Executive Summary
- 2 Update on Site Characterization
- 3 Identification and Analysis of Removal Action Alternatives
- 4 Detailed Analysis of Alternatives
 - 4.1 Effectiveness
 - 4.1.1 Overall Protection of Public Health and the Environment
 - 4.1.1.1 Long-Term Effectiveness and Permanence
 - 4.1.1.2 Compliance with ARARs
 - 4.1.1.3 Short-Term Effectiveness
 - 4.1.2 Reduction of Toxicity, Mobility, or Volume Through Treatment
 - 4.2 Implementability
 - 4.2.1 Technical Feasibility
 - 4.2.2 Administrative Feasibility
 - 4.2.3 Availability of Services and Materials
 - 4.2.4 State and Community Acceptance
 - 4.3 Cost
 - 4.3.1 Direct Capital Costs
 - 4.3.2 Indirect Capital Costs
 - 4.3.3 Long-Term Operation and Maintenance
- 5 Comparative Analysis of Removal Action Alternatives

1 Executive Summary

The Executive Summary shall provide a general overview of the contents of the EE/CA. It shall contain a brief discussion of the Site and the current and/or potential threat posed by conditions at the Site. It shall also identify the scope and objectives of the removal action and the alternatives.

2 Update on Site Characterization

Any additional Site Characterization work or evaluation that was not included in the Data Report or Reports shall be incorporated into the EE/CA Report.

3 Identification and Analysis of Removal Action Alternatives

Based on the analysis of the nature and extent of contamination and on the cleanup objectives developed in the previous section, a limited number of alternatives appropriate for addressing the removal action objectives shall be identified and assessed. Whenever practicable, the alternatives shall also consider the CERCLA preference for treatment over conventional containment or land disposal approaches.

Based on the available information, only the most qualified technologies that apply to the media or source of contamination shall be discussed in the EE/CA. The use of U.S. EPA presumptive remedy guidance may also provide an immediate focus to the identification and analysis of alternatives. Presumptive remedies involve the use of remedial technologies that have been consistently selected at similar sites or for similar contamination.

A limited number of alternatives, including any identified presumptive remedies, shall be selected for detailed analysis. Each of the alternatives shall be described with enough detail so that the entire treatment process can be accurately evaluated against the criteria listed in Section 4, below.

4 Detailed Analysis of Alternatives

Defined alternatives are evaluated against the short- and long-term aspects of three broad criteria: effectiveness, implementability, and cost.

4.1 Effectiveness

The effectiveness of an alternative refers to its ability to meet the objective regarding the scope of the removal action. The

"Effectiveness" discussion for each alternative shall evaluate the degree to which the technology would mitigate threats to public health and the environment, including providing overall protection of public health and the environment, compliance with ARARs, and providing a permanent reduction in toxicity, mobility or volume.

4.1.1 Overall Protection of Public Health and the Environment

How well each alternative protects public health and the environment shall be evaluated, including long-term effectiveness and permanence, compliance with ARARs and short-term effectiveness. Any unacceptable short-term impacts shall be identified. The discussion shall focus on how each alternative achieves adequate protection and describe how the alternative will reduce, control, or eliminate risks at the Site through the use of treatment, engineering, or institutional controls.

4.1.1.1 Long-Term Effectiveness and Permanence

This evaluation assesses the long-term effectiveness, and reliability of the controls that may be required to manage risk posed by treatment residuals and/or untreated wastes at the Site. The following components shall be considered for each alternative: magnitude of residual risk, adequacy and reliability of controls, and minimization of long-term maintenance.

4.1.1.2 Compliance with ARARs and Other Criteria, Advisories, and Guidance

The detailed analysis shall summarize requirements that are potentially applicable or relevant and appropriate to an alternative and describe how the alternative meets those requirements. A summary table may be employed to list potential ARARs. In addition to ARARs, Federal or State advisories, criteria, or guidance that may apply to the proposed action should be considered.

4.1.1.3 Short-Term Effectiveness

This criterion addresses the potential impacts of the alternative during implementation before the removal objectives have been met. Any potential adverse environmental or public health impacts should be discussed.

4.1.2 Reduction of Toxicity, Mobility, or Volume Through Treatment

This Section shall consider:

- The treatment process(es) employed and the material(s) it

will treat;

- The quantities of the hazardous materials to be destroyed or treated;
- The expected degree of reduction in toxicity, mobility, or volume;
- The degree to which treatment will be irreversible;
- The type, quantity and characteristics of residuals that will remain after treatment;

4.2 Implementability

This section is an assessment of the implementability of each alternative in terms of the technical and administrative feasibility necessary for each alternative's full execution. The following factors shall be considered under this criterion.

4.2.1 Technical Feasibility

This factor is to evaluate the degree of difficulty in constructing and operating the technology, including: the reliability of the technology; the need for maintenance; the ability to monitor and confirm attainment of cleanup action levels; the potential need for further actions; the availability of necessary services and materials; the scheduling aspects of implementing the alternatives during and after implementation; the potential adverse impacts on the local community during construction operation; and the difficulties in set-up and construction and operation. The evaluation shall determine if off-site treatment, storage, and disposal capacity, equipment, personnel, services and materials, and other resources necessary to implement an alternative shall be available in time to maintain a reasonable removal schedule.

4.2.2 Administrative Feasibility

The administrative feasibility factor evaluates those activities needed to gain necessary approvals from governmental agencies. The administrative feasibility of each alternative shall be evaluated, including the need for off-site permits, adherence to applicable nonenvironmental laws, and all other concerns of regulatory agencies.

4.2.4 State and Community Acceptance

U.S. EPA shall consider and address State and community acceptance of an alternative when making a recommendation and in the final selection of the alternative in the Action Memorandum.

4.3 Cost

The Respondents shall prepare a cost estimate for each alternative, including capital costs, annual operation and maintenance costs, and present worth. The relative costs of the alternatives shall be compared.

4.3.1 Capital Costs

Both direct and indirect capital costs shall be included in the cost estimate. Direct costs include costs for equipment, labor, and materials necessary to implement remedial actions. This includes construction, materials, land, buildings, transportation, analysis of samples, treatment, and disposal costs. Indirect costs include engineering expenses, permit costs, startup and shake down costs, and contingency allowances.

4.3.2 Long-Term Operation and Maintenance Costs

Costs for maintenance and long-term monitoring shall be presented. These costs shall include operating labor costs, maintenance materials and labor costs, auxiliary equipment and energy, disposal of residues, sampling and laboratory costs, administrative costs, maintenance reserve and contingency funds, rehabilitation costs, and site reviews.

5 Comparative Analysis of Removal Action Alternatives

Once removal action alternatives have been described and individually assessed against the evaluation criteria described in Section 5, above, a comparative analysis shall be conducted to evaluate the relative performance of each alternative in relation to each of the criteria. The purpose of the analysis shall be to identify advantages and disadvantages of each alternative relative to one another so that key trade offs that would affect the remedy selection can be identified.

